California Regional Water Quality Control Board

Los Angeles Region

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Gray Davis
Governor

October 24, 2003

Mr. Milton Shapiro
Victory Investment Co., Inc.
7610 Woodrow Wilson Drive
Los Angeles, CA 90046

CERTIFIED MAIL
RETURN RECEIPT REQUESTED
CLAIM NO. 7000 0520 0020 1693 5503

Dear Mr. Sharipo:

GENERAL WASTE DISCHARGE REQUIREMENTS FOR HRC INJECTION PILOT TEST AT PETROLEUM HYDROCARBON FUEL AND/OR VOLATILE ORGANIC COMPOUND IMPACTED SITES – MASTER SUN CLEANERS, 2405 W. ROSECRANS AVENUE, GARDENA, CALIFORNIA (FILE NO. 03-085, CI NO. 8606)

We have completed our review of your application for coverage under General Waste Discharge Requirements to inject Hydrogen Release Compound (HRC®) at the site to test its effectiveness for the bio-remediation of the volatile organic compounds contaminated groundwater.

Victory Investment Co., Inc (hereinafter Discharger) owns Master Sun Cleaners (Site) located at 2405 W. Rosecrans Avenue in Gardena, California (Figure 1). Master Sun Cleaners has been operating a dry cleaning business since January 1966. The Site is flanked by the LAX Beauty Center to the east and a vacant shop to the west. The north and south areas of the Site are paved with asphalt and are used for parking and delivery access. Soil assessments conducted at the Site from 1997 to 1999 indicated the presence of volatile organic compounds (VOCs) including tetrachloroethene (PCE) in the soil with concentrations ranging from 7,300,000 micrograms per kilogram (µg/Kg) to non-detected.

Six groundwater monitoring wells were installed on-site (MW-1 through MW-6). PCE was detected in Wells MW-1 and MW-2 (closest wells to the source area) with concentrations of 32,000 µg/L (1998) and 26,000 µg/L (1999), respectively. PCE was also detected in Well MW-6 (upgradient well) at 4.4 µg/L (1999). Additional onsite groundwater assessments conducted from monitoring wells MW-7d, MW-7s, PM-1 and PM-2 in October 2000 indicated the presence of 4,100 µg/L, 4,500 µg/L, 8,100 µg/L and 7,500 µg/L of PCE, respectively. Off-site groundwater assessments performed between October 2000 and August 2001 indicated the presence of up to 1,700 µg/L and 150 µg/L of PCE in hydropunch borings HP-11 and HP-21, respectively. Both borings are located to the south of the Site indicating the VOC plume has migrated offsite.

On April 28, 2003, the Discharger submitted the "Hydrogen Release Compound Injection Field Pilot Test Execution Plan" (Plan) proposing to inject HRC® at the site to test its effectiveness for the bio-remediation of the volatile organic compounds contaminated groundwater. Results of the pilot test will be used for design of a full-scale application of HRC® downgradient from the contaminant source area. Regional Water Quality Control Board staff (Mr. Dixon A. Oriola, Well Investigation Program) approved the Plan on July 2, 2003.

The Site is located in the Los Angeles Coastal Plain - West Coast Basin. The groundwater occurs in Recent and Pleistocene aquifers throughout the West Coast Basin. The perched aquifer, consisting of Zone A (up to 80 feet bgs) and zone B (from 80 to 140 feet bgs) of the Bellflower Aquiclude, and the Gage Aquifers are present beneath the Site. Perched groundwater is encountered at approximately 22 feet bgs. Groundwater flow direction is to the south at a gradient of approximately 0.0023 feet per foot (Figure 2). Groundwater contamination is detected in Zone A (up to 42.5 feet bgs).

The pilot test will be conducted in an 6 feet wide by 15 feet long area located approximately 400 feet to the south of the subject site (Figure 3). The HRC® will be applied to the saturated zone using a single stroke R.E. RUPE Company Model ORC/HRC 9-1500 injection pump. The injection rate of HRC® will be 12 to 15 pounds of HRC® per vertical foot per injection point. HRC® will be injected into the perched zone (Zone A) which is divided into four injection intervals per probe (37 to 42 feet bgs, 32 to 37 feet bgs, 27 to 32 feet bgs, and 22 to 27 feet bgs). A total of 240 to 300 pounds of HRC® per injection point will be injected resulting in a total of 1,200 to 1,500 pounds of HRC® for the entire injection field. The anticipated duration of the entire injection process is not more than 12 hours. Baseline groundwater sampling for VOCs and biological parameters will be conducted on the pilot study monitoring wells MW-9 (upgradient), MW-10 (downgradient), and MW-14 (treatment area) (Figure 3). A six-month monitoring program will be conducted after the injection using monitoring wells MW-9, MW-10, and MW-14 to evaluate the applicability of HRC® to increase chlorinated hydrocarbon biodegradation rates.

If the pilot or feasibility test is determined to be successful and a full-scale treatment system is proposed for site cleanup, then the following is required:

a. A final Remedial Action Plan (RAP) is to be submitted to the Regional Board for review and approval prior to its implementation; and
b. A revised Report of Waste Discharge (ROWD) is to be submitted for the full-scale treatment system.

Regional Board staff will review the revised ROWD to determine if it is complete or if additional information is needed. In addition, upon receipt of a complete ROWD, the Monitoring and Reporting Program will be revised to incorporate the approved full-scale treatment plan.

Any potential adverse water quality impacts that may result shall be localized, of short-term duration, and shall not impact any existing or prospective uses of groundwater. Groundwater quality shall be monitored to verify no long-term adverse impact to water quality. There may be small increases associated with soluble gases such as methane, ethane, ethene, and carbon dioxide. The Site is located in the City of Gardena at Latitude: 33° 54' 7" and Longitude: 118° 19' 8". The quantities of HRC® injected shall be documented per the Monitoring and Reporting Program No. CI-8606.

Regional Board staff have reviewed the information provided and have determined that the proposed discharge meets the conditions specified in Order No. R4-2002-0030, "*General*

Waste Discharge Requirements for Groundwater Remediation at Petroleum Hydrocarbon Fuel and/or Volatile Organic Compound Impacted Sites," adopted by this Regional Board on January 24, 2002.

Enclosed are your Waste Discharge Requirements, consisting of Regional Board Order No. R4-2002-0030 (Series No. 028) and Monitoring and Reporting Program No. CI-8606 and Standard Provisions. Please note that the discharge limits in Attachment A (Los Angeles Coastal Plain - West Coast Basin) of Order No. R4-2002-0030 are applicable to your discharge.

The Monitoring and Reporting Program requires you to implement the monitoring program on the effective date of this enrollment (October 24, 2003) under Regional Board Order No. R4-2002-0030. All monitoring reports shall be sent to the Regional Board, ATTN: Information Technology Unit.

When submitting monitoring or technical reports to the Regional Board per these requirements, please include a reference to Compliance File No. CI-8606, which will assure that the reports are directed to the appropriate file and staff. Do not combine other reports with your monitoring reports. Submit each type of report as a separate document.

We are sending a copy of Order No. R4-2002-0030 only to the applicant. A copy of the Order will be furnished to anyone who requests it.

If you have any additional questions, please contact Mr. David Koo at (213) 620-6155.

Sincerely,

Dennis A. Dickerson
Executive Officer

Enclosures:
1. Board Order No. R4-2002-0030
2. Monitoring and Reporting Program No. CI-8606
3. Standard Provisions Applicable to Waste Discharge Requirements (addressee only)

cc: Mr. Robert Sams, Office of Chief Counsel, State Water Resources Control Board
Mr. Michael Lauffer, Office of Chief Counsel, State Water Resources Control Board
Mr. John J. Moura, Esq., Sinnott, Dito, Moura, & Puebla
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Mr. Robert H. Black, Esq., Black, Compean & Hall
Mr. Robert Ehe, Los Angeles Regional Water Quality Control Board – Well Investigation Program
Mr. Fred Clark, The Source Group, Inc.